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SCIENCE

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UNIVERSITY EXTENSION¹

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THE circumstances under which university extension was introduced in this country and the early history of the movement are so familiar that time should be devoted to little more than a brief survey of the main facts.

The great popular educational factors in the United States previous to 1890 were the American National Lyceum founded in 1831 and Chautauqua, with its summer schools and Literary and Scientific Circle, started in 1874. Both of these societies, though quite independent of direct university affiliation, embraced many features that belong to university extension.

University influences were widely diffused through the Lyceum lecture courses, which included among their contributors such men as Daniel Webster, Emerson, Horace Mann, Wendell Phillips, and others of wide renown.

The true principle of educational extension underlay the establishment of the Lowell Institute of Boston and the Peabody Institute of Baltimore, both representatives of the early Lyceum. The debating-club, earnestly fostered by university extension to-day, began with the Lyceum, and the traveling library, so essential an adjunct to extension teaching, was first proposed in this country in 1831 when a portion of money was set aside by the Lyceum for what was termed "itinerating libraries."

Mr. Herbert B. Adams, in the *Report of the United States Bureau of Education*

¹ From a paper presented on behalf of the University of Wisconsin by Professor Louis E. Reber at the eleventh annual conference of the Association of American Universities.

for 1900, ascribes the establishment and spread of those summer assemblies, which were the forerunners of the summer schools of Harvard, Virginia, Wisconsin, and many other state universities, to the influence of the old Lyceum and says further, "It is no secret that the summer schools of Oxford and Cambridge were suggested by American experience."

Correspondence-study, a method of popular education which has in the past decade become an increasingly important feature of university extension teaching, was used in Chautauqua teaching as early as 1878. It is interesting to note in passing that this method under the title "Printed Lectures" was used in England in 1887, nine years later than its introduction by Chautauqua. These lectures are sent to remote and isolated students and were accompanied by lists of searching and suggestive questions similar to those which form an important feature of the more modern correspondence-study.

Chautauqua, like the Lyceum, has been useful in spreading university influences. Its summer schools are conducted chiefly by college professors, who for many years continued the instruction throughout the year by correspondence. At one time it was possible for the Chautauqua student to aspire by this means even to a college degree, the power of its granting being vested in the University of the State of New York. This privilege was withdrawn, however, when other means for home study became more generally available.

The English system of university extension was first fully presented to an American audience by Professor Herbert B. Adams, of Johns Hopkins University, who delivered an address upon this subject at a regular meeting of the American Library Association in September, 1887. Mr. Adams's address awakened prompt and

fruitful interest among those who were gathered at this conference, and an immediate result was the introduction of some extension work under the auspices of public libraries in Buffalo, Chicago and St. Louis.

Four months later, in January, 1888, Mr. Melvil Dewey, then librarian of Columbia University, addressed the regents of the University of the State of New York, and in July of the same year and again one year later, university convocations, advocating the introduction of university extension teaching in connection with the public library work of New York. In 1890 a committee of New York colleges and universities urged the regents of the University of the State of New York to introduce university extension as a part of the state university system of education.

In the same year, 1890, Philadelphia organized the American Society for the Extension of University Teaching and sent Mr. George Henderson, its first secretary, to England to study methods. This society was and is quite independent of university patronage, being supported by private contributions. Upon Mr. Henderson's return from England one center was organized and in the course of the following six months no less than twenty-three were under way.

The spring of 1891 brought the first state appropriation for the organization of university extension. This was in the state of New York and the sum appropriated was \$10,000 to be used for organization, printing and supervision. Mr. Dewey's report to the regents of the university remarks:

The university extension law met with opposition from the legislature till the clause was added providing that in working out a system in which one great essential was lectures, no money should be paid to lecturers. Thus the opponents were willing to have the play of Hamlet if the Prince

of Denmark could be excluded by state law. Fortunately [continues Mr. Dewey] there was no prejudice against public libraries, and we took the line of least resistance and spent our time and money in building up libraries and developing our splendid system of traveling libraries and collections. The language of the appropriation allowed us to develop study clubs, to do some general administrative work and print syllabi for occasional extension courses throughout the state, but we had no *funds for the two most essential elements, competent organizers and experienced lecturers.*

This quotation has been given at length to show how little, in fact, that first appropriation meant in the establishment of actual university extension teaching. This work was entered in the Bulletins of the university under the caption of "Home Education" and included extension teaching, study clubs, exchanges, traveling libraries, public libraries and the library school.

Early in 1891 a society for the extension of university teaching was organized in Chicago with Professor Zueblin as its secretary, but in 1892, extension having become an organic part of the educational system of the University of Chicago, the original society was disbanded.

In December of the year which had seen so much activity in the state of New York, in Chicago, and in Philadelphia, a national congress in the interest of university extension was called at Philadelphia. It is recorded in the annals of this meeting that in the four years intervening between Mr. Adams's address in 1887 and this date, December, 1891, twenty-eight states and territories had organized university extension work. The enthusiasm of those who attended the conference was unbounded. The new cause, too young to have been fully tried, too sanguine to admit its limitations, seemed to be all silver lining. Mr. Moulton's vision of "university education for the whole nation, organized upon

itinerant lines," had seized the imagination with a completeness that precluded recognition of unfavorable possibilities. Mr. Dewey, though so earnest an advocate of the movement, alone we are told sounded a note of caution, predicting the cooling that would follow upon the sudden blaze of this new flame, before the strong heat of a steady fire could be secured. In the following four or five years the truth of Mr. Dewey's prevision was amply substantiated, the work having been practically abandoned by a large number of universities whose adoption of it had been overhasty.

The more firmly established branches of university extension remained and steadily enlarged their usefulness, and in the following years new societies were founded to an extent worthy of note. But the wave of enthusiasm had passed, and the country was ready to look the matter squarely in the face, determine the adaptability of this transplanted system to American conditions, and solve the problem in accordance with its application to American needs.

In the *Atlantic Monthly* of March, 1892, an article was published by Professor George Herbert Palmer, entitled "Doubts about University Extension." This article has been quoted repeatedly in publications relating to university extension. Mr. Palmer's argument is to the effect that university extension in England "accompanies a general democratic upheaval of an aristocratic nation; it springs up in the neighborhood of universities where the common people do not resort; in its country other facilities for enabling man to capture knowledge are not yet general." He calls attention to the fact that England is a compact and thickly settled country, easy of access in every part, lending itself more readily than our vast areas to extension methods. Thus Mr. Palmer points to

fundamental differences between the two countries, and questions whether the English system of university extension can be made to thrive in our more democratic soil.

Grave doubts are expressed as to the permanent response which our people will make to the education offered, and attention is called to the difficulty of securing a sufficient number of suitable itinerant lecturers and teachers, as an insurmountable barrier. This article further cautions against the serious danger of superficiality, of cheapening, and a tendency to educational insincerity as a result of the new methods.

During the years succeeding the earliest experiments in university extension in this country, Mr. Palmer was not alone in his questioning. Many conservative views were set forth. The aristocracy of scholarship made its scornful comment in agreement with Miss Repplier's pithy summing-up of the method as offering "the second-rate at second-hand." Nor was the number small of those who echoed the voice of the Cambridge commissioners who saw need for all their resources within the walls of the university.

Publications during a period covering from ten to fifteen years expressed the general belief that university extension in the United States was practically dead. Even its most loyal friends saw that it was not accomplishing all that they had hoped. "It failed because it did not meet a popular demand," wrote one; "It has not created so large a body of serious students as was expected"; "University extension has fallen into channels of popular appeal," came from others.

It had become evident that though university extension teaching as borrowed from England was successful in several populous areas, yet, in order to become

coextensive with the nation, it must adopt new methods to fit new conditions.

The recognition of this fact heralded a new era for university extension and for some years past the work has been making its own response to doubters.

The fundamental differences between England and America pointed out by Mr. Palmer doubtless exist, yet those experiences of England which have led to recent modifications of method in order to bring about a closer affiliation between university and working classes would seem to imply that "the people" there are not dissimilar to "the people" here.

There has been some reason, no doubt, for the fear that extension teaching will be more or less superficial, but I believe that there is now general acceptance of the principle enunciated by Mr. Moulton, that "as dealing with people who work for the most part under difficulties," the method must be "*more rigorously thorough and not less*," than that of other agencies. It is recognized, also, that in comparing non-resident with resident students it is common experience to find in the former a strength of purpose and earnestness, greatly to their advantage.

The problem of finding a staff of extension workers possessing the very special qualifications required of them is still a serious one. President Hadley, with reference to university extension at Yale, says:

We made some experiments of that kind fifteen years ago, and repeated them in a little different form five or six years ago; but we felt in both cases that with conditions as they existed in this part of the country, the men who were capable of conducting such courses could obtain larger results by directing their energies into other channels.

Mr. Hadley's observation has more or less truth at the present time, but in the five or six years that have elapsed since Yale's latest experiment, university ex-

tension has undergone radical changes. The work has ceased to depend solely upon a staff of lecturers who must combine the qualities of teacher, organizer, public speaker, scholar and philanthropist. We no longer subscribe to the epigrammatic proposition of Mr. Lyman W. Powell (one-time extension secretary at the University of Wisconsin) who said of university extension, "It is not a system; it is a *man*." Significant as is the element of truth in this terse characterization, the time has passed when it expresses the whole truth or even a large proportion of the truth. If to-day we desired to express educational extension in a single word, that word would be *University*.

One of the most widely known and gifted extension lecturers in our country wrote a year or two ago of this phase of educational development:

Like all ideas and movements, it has fulfilled itself in unseen ways. It is no longer an occasional and accidental phase of university work; it is an organic part of it. It is no longer concerned merely or primarily with short lecture courses; for without neglecting the lecture work that appeals to general audiences, it aims to reach, like any other part of the university, a student body—the very large body of partial or non-resident students.

The words of this passage are taken from a recent report of the department of extension teaching in Columbia University. The work offered by this institution to the "partial or non-resident student body" referred to embraces courses of collegiate grade; professional and technical courses for teachers; evening technical and evening commercial courses; and short lecture courses. The instruction is carried on in late afternoons, evenings and Saturdays at the university buildings, at Teachers College, Morningside Heights and at other places where local centers may be established. These courses are intended

to give to men and women who can spend only a portion of their time in study an opportunity to gain a liberal general education or one applicable to their vocations, and to make progress if they so desire toward an academic degree, or a teacher's diploma.

Courses of university grade may be taken for credit or not as desired. If for credit, the applicant must fulfil all conditions for entrance to the university. If credit is not desired, no further qualification is required than the ability to satisfy the instructor that the course can be taken to advantage.

Of those students who were engaged in extramural courses last year, 1,206 took credit work and 11,719 non-credit work. Those who took credit work in extension courses in the university buildings numbered 2,032. Of these 224 matriculated. Credit work was carried on at seven centers in and about New York City and included twenty courses with a total of 615 lectures. Non-credit work was carried on in fifteen centers.

What more striking example can be shown of the present tendency to utilize the machinery of a great institution for a much larger student body than that qualified, by educational attainments and other conditions, to matriculate?

In preparation for a report of the status of university extension at the present time, inquiries were sent to 75 universities, colleges and other agencies for extension teaching. Responses were received from 65 institutions and of these, 54 reported participation in extension work of some form.

It is to be regretted that the limits of this paper do not admit of detailed descriptions of the growth and present magnitude of agricultural university extension. It would be necessary, in order to give

even a hasty review of its institutes, demonstrations, short courses, traveling schools and general activities, to present a chronicle of equal or greater length than this. Such a paper should be of compelling interest. The pioneers who first broke away from tradition went among the children of the soil bearing a message of improved conditions of work, of richer harvests, and of happier lives. Mr. Hamilton, of the Agricultural Department in Washington, is preparing a bulletin on the present status of this work which will be published, I believe, in the course of a few weeks.

Description must be omitted, also, of a very large number of extension agencies, such as the People's University Extension Society of New York, with its splendid philanthropies, and the free lecture courses offered in our leading cities, among which those of the New York Department of Education, so ably conducted by Dr. Leipziger, are preeminent.

Responses to inquiries show two important facts: first, a growing tendency on the part of institutions of higher learning toward extension of their usefulness to persons who are not candidates for a degree or who do not have the educational qualifications to matriculate in the university, and second, that in newer developments of extension teaching the formal lecture method has yielded, in a large measure, to other educational forms. Among these, correspondence-study has become increasingly prominent, especially for students remote from cities or large towns. Also, as a means of additional education for teachers and other seasonal workers, a rapid expansion and increase in the number of summer schools has taken place. And in the larger cities, late afternoon, evening and Saturday classes at local centers have become a valuable ex-

tension agency for vocational or general training.

The experience of the University of Chicago with respect to the original form of university extension teaching, namely, by means of lecture courses accompanied by classes, written papers and examinations, has been somewhat exceptional. Its work extends over nearly half the continent, covering 28 states, thus demonstrating that large distances do not necessarily present insurmountable difficulties. In 1907-8 the total attendance at lectures reached 53,141 persons, the average attendance per lecture was 282, and the average class attendance, 150. In 1908-9 a drop was experienced in the lecture audience to 31,094, but this was directly traceable to the loss of four popular lecturers, Professors Zueblin, Sparks, Howarth and Willett, whose places were not filled. Chicago has been successful, also, in correspondence-study teaching, her record for this year showing an aggregate of 2,500 active students.

Mention has been made of classes offered in other than work hours by Columbia University. Brown University also gives night lectures, for credit or not as those who take the work desire. Tulane, Chicago, Pittsburgh, Northwestern and Cincinnati universities are doing similar work. In every case, I believe the only condition imposed upon those students who do not desire credit is that they shall satisfy the instructor that they can take the work to advantage. Harvard offers this year in Boston three evening courses for credit in freshman and sophomore studies through the Lowell Institute. Two universities recently organized, Toledo and Newark, are providing in their foundation for extension teaching at other than workers' hours. Toledo, indeed, like Exeter, Colchester and Reading in England, is the

direct outgrowth of a university extension center.

Of 32 *state* universities and colleges reported, 23 are offering general extension work. Of these, 15 have thoroughly organized, comprehensive extension departments under the permanent direction of a dean, director or extension committee (universities of California, Colorado, Florida, Georgia, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Nevada, Oklahoma, Oregon, Tennessee, Texas, Utah, Washington, Wisconsin, Wyoming, Pennsylvania State College and Rhode Island State College).

With reference to credit work offered by means of extension courses, returns show at least 22 universities in this classification (Brown, Chicago, Cincinnati, Colorado, Columbia, Florida, Harvard, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Northwestern, Oregon, Pittsburgh, Texas, Toledo, Tulane, Washington—at St. Louis—Wisconsin and Wyoming). Of these, 11 use correspondence-study in their extension teaching (Chicago, Florida, Indiana, Kansas, Minnesota, Nebraska, Oregon, Texas, Washington, Wisconsin and Wyoming).

It is noticeable that a number of state institutions are making use of extension methods chiefly as an aid to the teachers of the state. This limited field probably results from three causes: first, the evident need of some agency to assist the busy teacher to keep in touch with educational advances; second, the fact that this is the path of least resistance, extension work among teachers offering no difficult problems, and, third, on account of the organic relations between the teacher and the state university, which are evidently becoming more closely knit, in spite of the high-school protest against university domination.

The sums devoted by state institutions to extension teaching during the past years have varied greatly. In a number of these institutions the work is either of recent origin or newly reorganized. Not a few of the responses from heads of state universities record the intention to ask for specific appropriations at the next legislative session.

Except in a few cases extension work has not been self-supporting and, unless conducted under the most favorable conditions as to location, it cannot be made self-supporting. Nor does there seem to be a logical reason why this form of education should be less freely acknowledged as a public charge than the old established institutions of our educational system. Its immense possibilities for economic and cultural usefulness to the whole people, its need for state support to insure a permanent existence, and the fact that the equipment of established institutions should be made available for its use, all point to the wisdom of making university extension an organic part of the state system of education.

Conclusions drawn from the data collected point to a notable broadening and liberalizing of the academic spirit. The fact that there are those among the old conservative universities now offering extension teaching with no more stringent specification than that the applicant shall be able to show that he can take the work to advantage, is evidence of a remarkable change in their educational atmosphere.

In the state universities a similar spirit is manifested, but in a greater variety of ways. The state university recognizes a responsibility to a more definite constituency—the people of the state who support it. That this constituency shall be served by the university in every way in which the university is the best instrument to

render the service, is a part of the new educational creed. This conception of the responsibility of state institutions has led to an especially wide-reaching organization for extension teaching in certain states, notably Wisconsin, Nebraska, Texas, Minnesota and some others.

It has been seen that the principles underlying university extension are as old as the oldest educational institutions and that many features of the work in its present development are merely adaptations of forms introduced in the past. A superficial view of these facts may provoke some degree of discouragement in the believer in university extension as a permanent partial solution of the American problem of further education for the masses. It is my desire to point out wherein modifications in the present forms would seem to promise remedies for the defects of earlier experiments and why, therefore, we may believe that in America as in England, new applications of tried methods will succeed where old ones were ineffective.

THE BOTANICAL CONGRESS AT BRUSSELS

THE third International Botanical Congress was held at Brussels, Belgium, May 14-22, 1910. Saturday, the fourteenth, was the day for registration. On Sunday, the fifteenth, the members of the congress assisted at a session of the Royal Botanical Society of Belgium, held in the "dome" of the large building connected with the Jardin Botanique, at which several interesting papers were presented by members of the society. Two general sessions of the congress were held in the same room; the opening session Monday morning, the sixteenth, and the closing on Sunday, the twenty-second. No regular sessions of the congress were held in the evening, but during the week several interesting papers on phytogeographical subjects, economic botany, etc., were given in the evening.

Of the three sections into which the con-

gress was divided for the special work of the week, perhaps the most important was the "Section on Nomenclature." The meetings of this section were held on the exposition grounds in Festival Hall.

As is well known, the Vienna Congress in 1905 selected Linnaeus's "*Species Plantarum*," 1753, as the starting point for the nomenclature of the seed plants (Spermatophytes) and vascular cryptogams (Pteridophytes). It also established the general principles and codified the rules which form the *rules of nomenclature for plants*. In dealing with the "cellular cryptogams" certain problems were presented which the Vienna Congress decided should have special consideration, viz., the question of different, later starting points for the nomenclature of different groups of the "cellular cryptogams," and the problems connected with the nomenclature of the fungi possessing a pleomorphic life cycle.

As to the starting point for the nomenclature of plants it is well known that there were two opinions, as follows:

1. That there should be a single date recognized for the beginning of the nomenclature of all plants. This opinion was based on the principle of uniformity in time or date as the starting point.

2. That there might be several different (multiple) dates or starting points for the nomenclature of different groups. This opinion was based on the principle that *uniformity in the selection of the earliest comprehensive work treating a group, large or small, in a somewhat modern sense*, was of more importance than the principle of uniformity of date. Therefore, the Vienna Congress wisely decided to refer the consideration of the nomenclature of the "cellular cryptogams" to the Brussels Congress in 1910 in order that these problems might be studied in the meantime.

Since it will be several months before the complete proceedings of the Brussels Congress can be published, we present here, for the benefit of American botanists, a brief statement of the most important legislation enacted by the Section on Nomenclature.